

No.

200300142

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

South Dakota Agricultural Experiment Station

Whereas, THERE HAS BEEN PRESENTED TO THE
Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE, OR USING IT IN PRODUCING A HYBRID OR PLANT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. IN THE UNITED STATES SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED, AND SHALL CONFORM TO THE NUMBER OF GENERATIONS SPECIFIED BY THE OWNER OF THE RIGHTS. (64 STAT.

1542, 7 U.S.C. 2321 ET SEQ.)

WHEAT, COMMON

'Briggs'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this nineteenth day of September, in the year two thousand and three.

Attest:

Thomas A. Salt

Acting Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

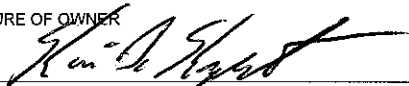
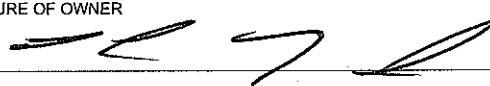
Anderson
Agriculture

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE
(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF OWNER South Dakota Agricultural Experiment Station		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME SD3367		3. VARIETY NAME Briggs	
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country) South Dakota State University Ag Hall 129 Brookings SD 57007		5. TELEPHONE (include area code) 605-688-4149		FOR OFFICIAL USE ONLY PVPO NUMBER 200300142 FILING DATE Feb. 7, 2003	
		6. FAX (include area code) 605-688-6065			
7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.) Agricultural Experiment Station		8. IF INCORPORATED, GIVE STATE OF INCORPORATION		9. DATE OF INCORPORATION	
10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. (First person listed will receive all papers)				FILING AND EXAMINATION FEES: \$ 2705.00 DATE 4/7/2003 CERTIFICATION FEE: \$ 432.00 DATE 9/16/2003	
Dr. Kevin D. Kephart, Director SD Ag Experiment Station Box 2207 SDSU Brookings SD 57007 Dr. Karl Glover Spring Wheat Breeder Plant Science Department NPB 247 SDSU Brookings SD 57007					
11. TELEPHONE (Include area code) 605-688-4769		12. FAX (Include area code) 605-688-4452		13. E-MAIL Karl_Glover@sdstate.edu	
14. CROP KIND (Common Name) Hard Red Spring Wheat		15. GENUS AND SPECIES NAME OF CROP TRITICUM AESTIVUM L.		16. FAMILY NAME (Botanical) GRAMINEAE	
17. IS THE VARIETY A FIRST GENERATION HYBRID? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		18. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse)			
a. <input checked="" type="checkbox"/> Exhibit A. Origin and Breeding History of the Variety b. <input checked="" type="checkbox"/> Exhibit B. Statement of Distinctness c. <input checked="" type="checkbox"/> Exhibit C. Objective Description of Variety d. <input checked="" type="checkbox"/> Exhibit D. Additional Description of the Variety (Optional) e. <input checked="" type="checkbox"/> Exhibit E. Statement of the Basis of the Owner's Ownership f. <input checked="" type="checkbox"/> Voucher Sample (2,500 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public repository) g. <input checked="" type="checkbox"/> Filing and Examination Fee (\$2,705), made payable to "Treasurer of the United States" (Mail to the Plant Variety Protection Office)		19. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD AS A CLASS OF CERTIFIED SEED? See Section 83(a) of the Plant Variety Protection Act <input checked="" type="checkbox"/> YES (If "yes", answer items 20 and 21 below) <input type="checkbox"/> NO (If "no", go to item 22) 20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF CLASSES? IF YES, WHICH CLASSES? <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED 21. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? IF YES, SPECIFY THE <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED NUMBER 1, 2, 3, etc. (If additional explanation is necessary, please use the space indicated on the reverse.)			
22. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U.S. OR OTHER COUNTRIES? <input checked="" type="checkbox"/> YES 3/1/02 USA <input type="checkbox"/> NO IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES. (Please use space indicated on reverse.)		23. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT (PLANT BREEDER'S RIGHT OR PATENT)? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO IF YES, PLEASE GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. (Please use space indicated on reverse.)			
24. The owners declare that a viable sample of basic seed of the variety will be furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate. The undersigned owner(s) is(are) the owner of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act. Owner(s) is(are) informed that false representation herein can jeopardize protection and result in penalties.					
SIGNATURE OF OWNER 			SIGNATURE OF OWNER 		
NAME (Please print or type) Dr. Kevin D. Kephart			NAME (Please print or type) Dr. Karl Glover		
CAPACITY OR TITLE Director, SDAES		DATE 1-31-2003		CAPACITY OR TITLE Spring Wheat Breeder	
				DATE 02/03/2003	

GENERAL: To be effectively filed with the Plant Variety Protection Office (PVPO), **ALL** of the following items must be received in the PVPO: (1) Completed application form signed by the owner; (2) completed exhibits A, B, C, E; (3) for a seed reproduced variety at least 2,500 viable untreated seeds, for a hybrid variety at least 2,500 untreated seeds of each line necessary to reproduce the variety, or for tuber reproduced varieties verification that a viable (*in the sense that it will reproduce an entire plant*) tissue culture will be deposited and maintained in an approved public repository; (4) check drawn on a U.S. bank for \$2,705 (\$320 filing fee and \$2,385 examination fee), payable to "Treasurer of the United States" (See Section 97.6 of the Regulations and Rules of Practice.) Partial applications will be held in the PVPO for not more than 90 days, then returned to the applicant as unfilled. Mail application and other requirements to Plant Variety Protection Office, AMS, USDA, Room 500, NAL Building, 10301 Baltimore Avenue, Beltsville, MD 20705-2351. Retain one copy for your files. All items on the face of the application are self explanatory unless noted below. Corrections on the application form and exhibits must be initialed and dated. **DO NOT** use masking materials to make corrections. If a certificate is allowed, you will be requested to send a check payable to "Treasurer of the United States" in the amount of \$320 for issuance of the certificate. Certificates will be issued to owner, not licensee or agent.

Plant Variety Protection Office

Telephone: (301) 504-5518

FAX: (301) 504-5291

Homepage: <http://www.ams.usda.gov/science/pvpo/pvp.htm>

ITEM

- 18a. Give:
- (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method;
 - (2) the details of subsequent stages of selection and multiplication;
 - (3) evidence of uniformity and stability; and
 - (4) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified
- 18b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. If the new variety is most similar to one variety or a group of related varieties:
- (1) identify these varieties and state all differences objectively;
 - (2) attach statistical data for characters expressed numerically and demonstrate that these are clear differences; and
 - (3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness.
- 18c. Exhibit C forms are available from the PVPO Office for most crops; specify crop kind. Fill in Exhibit C (Objective Description of Variety) form as completely as possible to describe your variety.
- 18d. Optional additional characteristics and/or photographs. Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, etc.
- 18e. Section 52(5) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. An Exhibit E form is available from the PVPO.
19. If "Yes" is specified (*seed of this variety be sold by variety name only, as a class of certified seed*), the applicant **MAY NOT** reverse this affirmative decision after the variety has been sold and so labeled, the decision published, or the certificate issued. However, if "No" has been specified, the applicant may change the choice. (See *Regulations and Rules of Practice, Section 97.103*).
22. See Sections 41, 42, and 43 of the Act and Section 97.5 of the regulations for eligibility requirements.
23. See Section 55 of the Act for instructions on claiming the benefit of an earlier filing date.

21. CONTINUED FROM FRONT (Please provide a statement as to the limitation and sequence of generations that may be certified.)

22. CONTINUED FROM FRONT (Please provide the date of first sale, disposition, transfer, or use for each country and the circumstances, if the variety (including any harvested material) or a hybrid produced from this variety has been sold, disposed of, transferred, or used in the U.S. or other countries.)

23. CONTINUED FROM FRONT (Please give the country, date of filing or issuance, and assigned reference number, if the variety or any component of the variety is protected by intellectual property right (Plant Breeder's Right or Patent).)

NOTES: It is the responsibility of the applicant/owner to keep the PVPO informed of any changes of address or change of ownership or assignment or owner's representative during the life of the application/certificate. There is no charge for filing a change of address. The fee for filing a change of ownership or assignment or any modification of owner's name is specified in Section 97.175 of the regulations. (See Section 101 of the Act, and Sections 97.130, 97.131, 97.175(h) of the Regulations and Rules of Practice.)

To avoid conflict with other variety names in use, the applicant must check the appropriate recognized authority. For example, for agricultural and vegetable crops, contact: Seed Branch, AMS, USDA, Room 213, Building 306, Beltsville Agricultural Research Center--East, Beltsville, MD 20705. Telephone: (301) 504-8089. <http://www.ams.usda.gov/lsg/seed.htm>

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 3.0 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, sex, religion, age, disability, political beliefs, sexual orientation, or marital or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call 202-720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

S&T-470 (07-01) designed by the Plant Variety Protection Office with WordPerfect 9.0. Replaces STD-470 (04-01) which is obsolete.

EXHIBIT A
Briggs (SD3367)
Origin and Breeding History of the Variety
(Revised 5/10/2003)

Briggs is an F_4 derived line from the three-parent cross 'BW114/Bergen//SD3097' made at Brookings, South Dakota in the winter of 1991-92. The breeding line BW114 has been released as the variety 'Pasqua' by Agriculture Canada. The pedigree of SD3097 is Uratza/SD2962//2999.

The F_1 plants were grown at Yuma, Arizona during the winter (1992-1993). Individual F_2 plant selections were made at Brookings, South Dakota in 1993 and were grown at Yuma, Arizona the following winter (1993-94) as plant rows. The plant rows at Yuma were harvested as rows and used to plant $F_{2.4}$ yield trials and a space planted nursery at Brookings in 1994. Based on data collected from the yield trials, individual plants were selected within the selected populations. Populations were selected based on grain yield, grain volume weight, and bread-making characteristics and individual plants were visually selected for resistance to prevalent foliar pathogens (*i.e.*, leaf and stem rust). Plant rows were grown in Yuma during the winter (1994-95) and $F_{4.6}$ yield trials were conducted at Brookings during the summer of 1995. Based on the yield performance and the disease resistance, it was promoted to first year replicated yield trial in 1996 with an experimental designation of SD3367. Seed was increased by the South Dakota Spring Wheat Breeding Program from 1998 through 2000. Breeders' seed was produced in 2000 and Foundation seed was produced in 2001.

Briggs has been tested within the South Dakota State University Spring Wheat Breeding Program from 1997 through 2002. It has also been tested from 1999 through 2002 in our state Crop Performance Trial (CPT) tests. Additionally, it was entered in the 2000 and 2001 Uniform Regional Spring Wheat Nursery. Briggs was tested by the Wheat Quality Council (WQC) in 2000.

Briggs has been observed for five generations of reproduction and during the seed increase period. It is stable and uniform. ~~No variants were observed.~~

MAH
8/22/03
per correspondence
of 8/22/03

Based on the observation of approximately 220,000 heads of 'Briggs' (tested as SD3367) within 2001 Foundation Seed increase fields, two variant plant types were documented. The first variant was generally 4 to 5 inches taller than the surrounding plant canopy. The second type, which also possessed a different shaped head, generally stood 7 to 10 inches above the surrounding canopy. The first variant was present at a frequency of approximately 0.059% while the second variant was present at a frequency of approximately 0.021%. Total variants allowed within a field of Briggs should not exceed 0.1%.

EXHIBIT B
Briggs (SD3367)
Statement of Distinctness
(Revised 5/10/2003)

Our records indicate that Briggs is most similar to 'Oxen', 'Walworth', and 'Russ'. Test weight and heading date measurements were found as not significantly different among these four varieties. Grain yield, plant height, and Polyacrylamide Gel Electrophoresis (PAGE), however, all reveal that Briggs is unique in comparison to Oxen, Walworth, and Russ.

Grain Yield: Based on analysis of yield data collected from 1998 to 2002 over several South Dakota locations, Briggs produced significantly higher grain yield than Oxen, Walworth, and Russ by 1.4, 1.4, and 1.2 bushels per acre respectively (Table 1).

Plant Height: Based on analysis of plant height data collected from 1998 to 2002 over several South Dakota locations, Briggs was significantly (3.1 cm) taller than Oxen, significantly (2.3 cm) shorter than Russ, and statistically similar, though 0.4 cm shorter, than Walworth (Table 2).

Polyacrylamide Gel Electrophoresis (PAGE): Revealed that Briggs differs from Walworth, Oxen, and Russ by at least two protein-bands (Figure 1). Arrow "A" on the photograph points to a band that is missing in Briggs but present in Oxen, Walworth and perhaps 2375. Arrow "B" highlights a band that is present only in Briggs.

Additional PAGE has been performed to differentiate Briggs from 'Olaf' and 'Newana'(Figure 2). Arrow "A" on figure 2 points to a band that Briggs possess which is clearly absent in Olaf. Likewise, Arrow "B" highlights a protein band in Briggs that is not present in the same form within Newana.

Original photographs of these PAGE gels are on file. This PAGE analysis was conducted by Dr. Brent Turnipseed, manager of the South Dakota State University Seed Testing Laboratory.

Table 1. Yield (bu/ac) comparisons among four hard red spring wheat varieties tested from 1998 to 2002 in South Dakota State University Advanced Yield Trials.

Year	1998	1999	2000	2001	2002	'98-'02
Locations	7	6	8	7	6	34
Entry						
Briggs	45.5	41.6	48.2	46.7	34.1	43.3
Walworth	45.3	42.7	43.3	42.6	31.2	41.9
Russ	43.5	40.5	43.0	45.8	33.1	42.1
Oxen	43.2	37.6	44.7	47.7	32.7	41.9
CV	6.3	8.9	8.6	8.7	8.4	7.4
LSD	1.5	2.3	2.0	2.2	1.6	0.7

Table 2. Plant height (cm) comparisons among four hard red spring wheat varieties tested from 1998 to 2002 in South Dakota State University Advanced Yield Trials.

Year	1998	1999	2000	2001	2002	'98-'02
Locations	3	2	6	6	5	23
Entry						
Briggs	82.1	86.3	78.5	77.3	70.4	76.7
Walworth	83.5	87.3	79.7	76.9	76.2	77.1
Russ	83.3	89.7	83.6	78.2	71.5	79.0
Oxen	79.5	82.7	78.0	73.5	65.7	73.6
CV	4.0	20.0	4.8	5.4	5.3	5.1
LSD	3.9	NS	2.8	2.6	2.5	1.2

Figure 1. Polyacrylamide Gel Electrophoresis (PAGE) gel of hard red spring wheat cultivars Briggs Oxen Walworth, Russ, and 2375 presented in the same order.

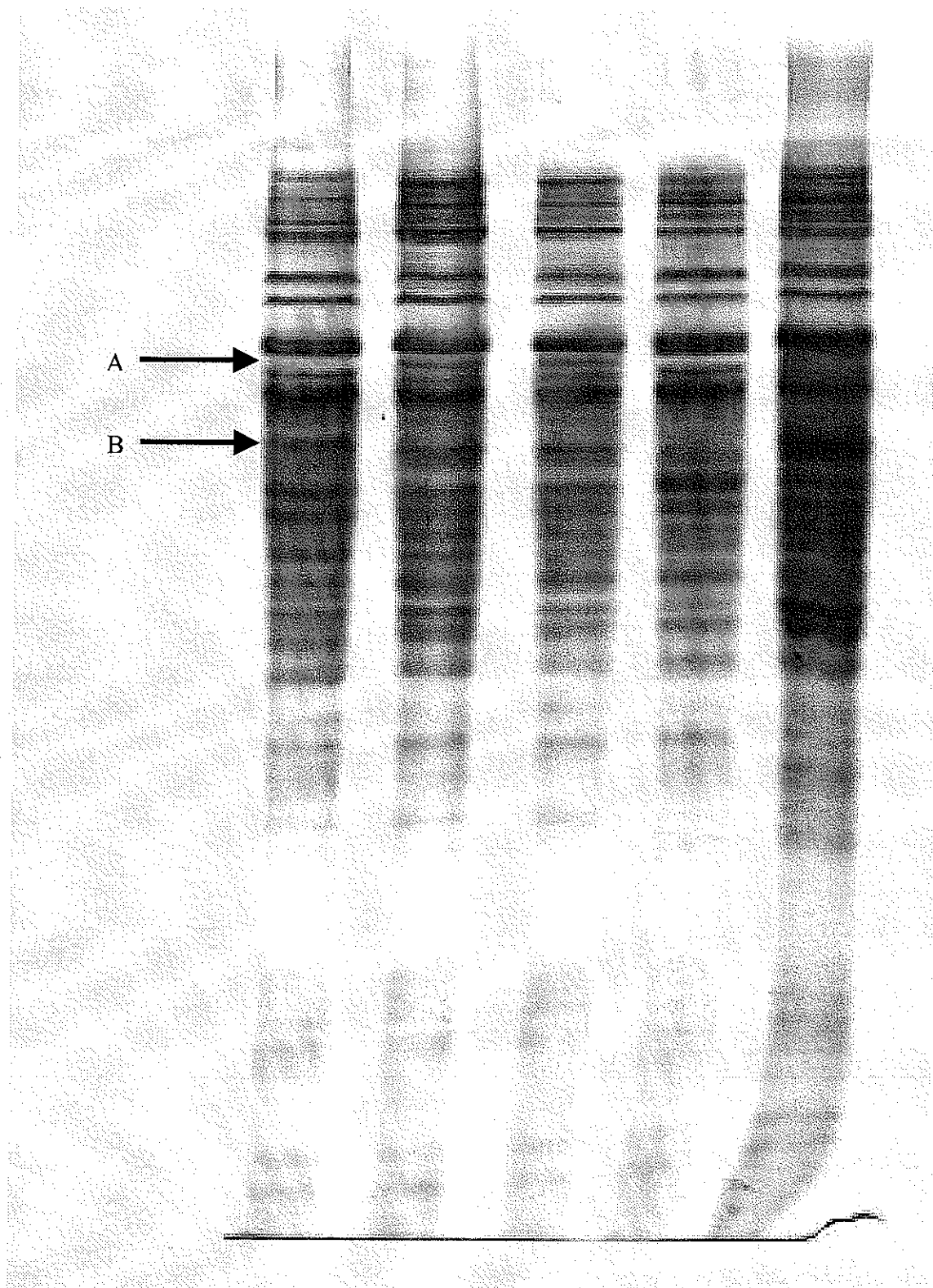
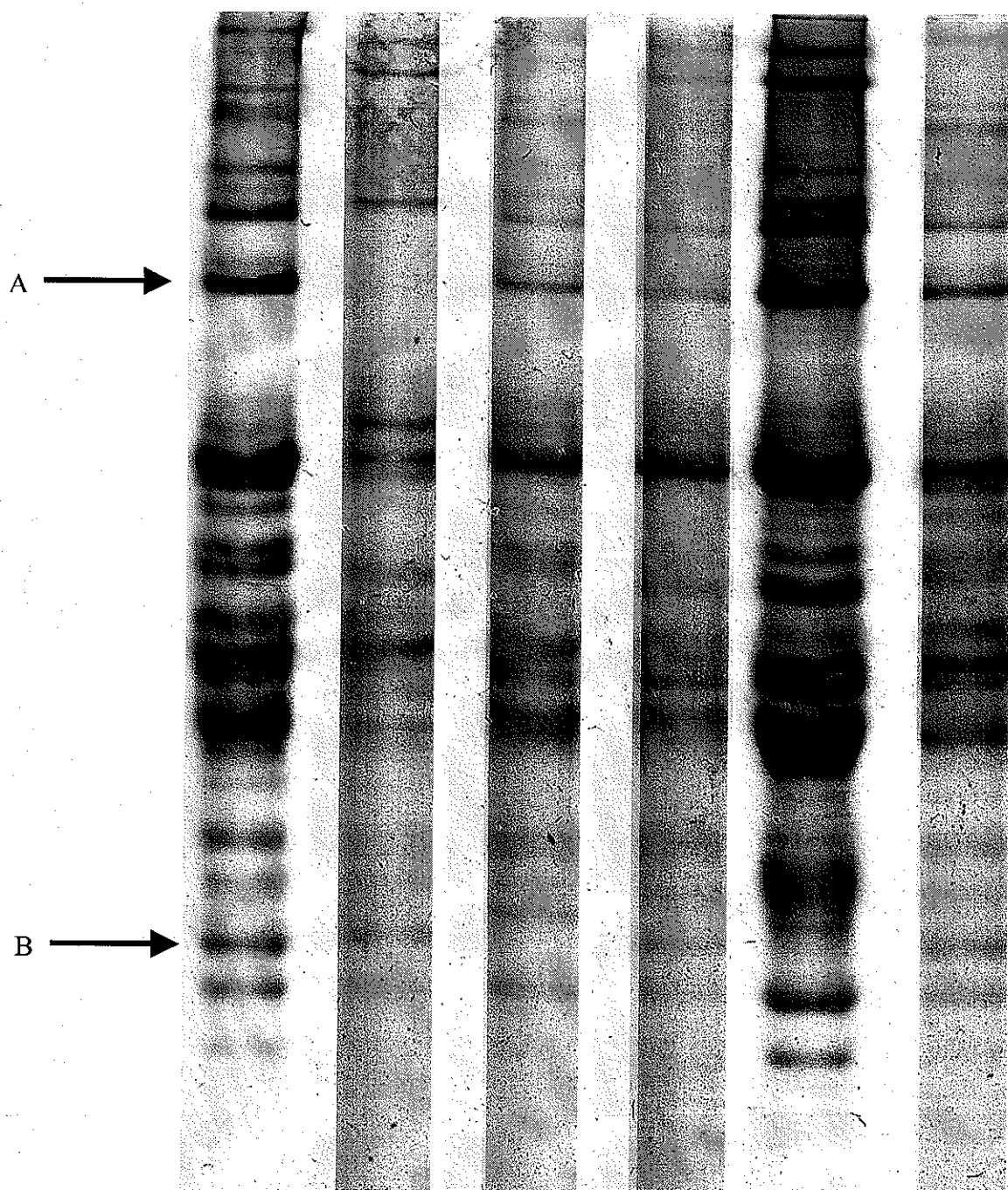


Figure 2. Polyacrylamide Gel Electrophoresis (PAGE) gel of hard red spring wheat cultivars Briggs, Olaf, Newana, 2375, Walworth, and an additional lane of Briggs presented from left to right.



Instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

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U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MD 20705

EXHIBIT C
(Wheat)

OBJECTIVE DESCRIPTION OF VARIETY
WHEAT (*Triticum* spp.)

NAME OF APPLICANT(S) South Dakota Agricultural Experiment Station	FOR OFFICIAL USE ONLY
ADDRESS (Street and No. or RD No., City, State, and Zip Code) South Dakota State University Agricultural Hall 129 Brookings SD 57007	PVPO NUMBER 200300142
	VARIETY NAME Briggs
	TEMPORARY OR EXPERIMENTAL DESIGNATION SD3367

PLEASE READ ALL INSTRUCTIONS CAREFULLY: Place the appropriate number that describes the varietal character of this variety in the boxes below. Place a zero in the first box (e.g. or) when number is either 99 or less or 9 or less respectively. Data for quantitative plant characters should be based on a minimum of 100 plants. Comparative data should be determined from varieties entered in the same trial. Royal Horticultural Society or any recognized color standard may be used to determine plant colors; designate system used:

Please answer all questions for your variety; lack of response may delay progress of your application.

1. KIND:

=Common

2=Durum

3=Club

4=Other (SPECIFY):

2. VERNALIZATION:

1=Spring

2=Winter

3=Other (SPECIFY):

3. COLEOPTILE ANTHOCYANIN:

1=Absent

2=Present

4. JUVENILE PLANT GROWTH:

1=Prostrate

2=Semi-erect

3=Erect

5. PLANT COLOR (boot stage):

1 = Yellow-Green

2 = Green

3 = Blue-Green

6. FLAG LEAF (boot stage):

1 = Erect

2 = Recurved

1 = Not Twisted

2 = Twisted

7. EAR EMERGENCE:

Number of Days Earlier Than Chris

Number of Days Later Than Forge

8. ANTHHER COLOR:

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☐ 1

1 = Yellow

2 = Purple

9. PLANT HEIGHT (from soil to top of head, excluding awns):

☐ 0 ☐ 3cm Taller Than Oxen☐ 0 ☐ 8cm Shorter Than Chris

* Relative to a PVPO-Approved Commercial Variety Grown in the Same Trial

10. STEM:

A. ANTHOCYANIN

☐ 1

1 = Absent

2 = Present

B. WAXY BLOOM

☐ 2

1 = Absent

2 = Present

C. HAIRINESS (last internode of rachis)

☐ 2

1 = Absent

2 = Present

D. INTERNODE (SPECIFY NUMBER)

☐ 1

1 = Hollow

2 = Semi-solid

3 = Solid

E. PEDUNCLE

☐ 2

1 = Absent

2 = Present

☐ cm Length

11. HEAD (at Maturity):

A. DENSITY

☐ 3

1 = Lax

2 = Middense

3 = Dense

B. SHAPE

☐ 1

1 = Tapering

2 = Strap

3 = Clavate

4 = Other (SPECIFY):

C. CURVATURE

☐ 2

1 = Erect

2 = Inclined

3 = Recurved

D. AWNEDNESS

☐ 4

1 = Awnless

2 = Apically Awnletted

3 = Awnletted

4 = Awned

12. GLUMES (at Maturity):

A. COLOR

☐ 1

1 = White

2 = Tan

3 = Other (SPECIFY) _____

C. BEAK

☐ 3

1 = Obtuse

2 = Acute

3 = Acuminate

B. SHOULDER

☐ 2

1 = Wanting

2 = Oblique

3 = Rounded

4 = Square

5 = Elevated

6 = Apiculate

D. LENGTH

☐ 2

1 = Short

2 = Medium

(ca. 7mm)

(ca. 8mm)

3 = Long (ca. 9mm)

03 FEB -7 P2:52

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12. GLUMES (at Maturity) Continued:

E. WIDTH

- ☐ 2 1 = Narrow (ca. 3mm) 2 = Medium (ca. 3.5mm)
3 = Wide (ca. 4mm)

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13. SEED:

A. SHAPE

- ☐ 1 1 = Ovate 2 = Oval 3 = Elliptical

C. BRUSH

- ☐ 2 1 = Short 2 = Medium 3 = Long
☐ 1 1 = Not Collared 2 = Collared

B. CHEEK

- ☐ 2 1 = Rounded 2 = Angular

D. CREASE

- ☐ 2 1 = Width 60% or less of Kernel
2 = Width 80% or less of Kernel
3 = Width Nearly as Wide as Kernel

☐ 2 1 = Depth 20% or less of Kernel
2 = Depth 35% or less of Kernel
3 = Depth 50% or less of Kernel

E. Color

- ☐ 3 1 = White 2 = Amber 3 = Red
4 = OTHER (Specify)

G. PHENOL REACTION (see instructions):

- ☐ 1 = Ivory 2 = Fawn
3 = Light Brown 4 = Dark Brown
5 = Black

F. TEXTURE

- ☐ 1 1 = Hard 2 = Soft

14. DISEASE: (0=Not Tested; 1=Susceptible; 2=Resistant; 3=Intermediate; 4=Tolerant)

PLEASE INDICATE THE SPECIFIC RACE OR STRAIN TESTED

- | | |
|---|--|
| <input type="checkbox"/> 2 Stem Rust (<i>Puccinia graminis</i> f. sp. <i>tritici</i>) | <input type="checkbox"/> 3 Leaf Rust (<i>Puccinia recondita</i> f. sp. <i>tritici</i>) |
| <input type="checkbox"/> 0 Stripe Rust (<i>Puccinia striiformis</i>) | <input type="checkbox"/> 0 Loose Smut (<i>Ustilago tritici</i>) |
| <input type="checkbox"/> 0 Tan Spot (<i>Pyrenophora tritici-repentis</i>) | <input type="checkbox"/> 0 Flag Smut (<i>Urocystis agropyri</i>) |
| <input type="checkbox"/> 0 Halo Spot (<i>Selenophoma donacis</i>) | <input type="checkbox"/> 0 Common Bunt (<i>Tilletia tritici</i> or <i>T. laevis</i>) |
| <input type="checkbox"/> 0 <i>Septoria nodorum</i> (Glume Blotch) | <input type="checkbox"/> 0 Dwarf Bunt (<i>Tilletia controversa</i>) |
| <input type="checkbox"/> 0 <i>Septoria avenae</i> (Speckled Leaf Disease) | <input type="checkbox"/> 0 Karnal Bunt (<i>Tilletia indica</i>) |
| <input type="checkbox"/> 0 <i>Septoria tritici</i> (Speckled Leaf Blotch) | <input type="checkbox"/> 0 Powdery Mildew (<i>Erysiphe graminis</i> f. sp. <i>tritici</i>) |
| <input type="checkbox"/> 3 Scab (<i>Fusarium</i> spp.) | <input type="checkbox"/> 0 "Snow Molds" |

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PLEASE INDICATE THE SPECIFIC RACE OR STRAIN TESTED

- | | |
|---|---|
| <input type="checkbox"/> 0 "Black Point" (Kernel Smudge) | <input type="checkbox"/> 1 Common Root Rot (<i>Fusarium</i> , <i>Cochliobolus</i> and <i>Bipolaris</i> spp.) |
| <input type="checkbox"/> 0 Barley Yellow Dwarf Virus (BYDV) | <input type="checkbox"/> 0 Rhizoctonia Root Rot (<i>Rhizoctonia solani</i>) |
| <input type="checkbox"/> 0 Soilborne Mosaic Virus (SBMV) | <input type="checkbox"/> 0 Black Chaff (<i>Xanthomonas campestris</i> pv. <i>translucens</i>) |
| <input type="checkbox"/> 0 Wheat Yellow (Spindle Streak) Mosaic Virus | <input type="checkbox"/> 0 Bacterial Leaf Blight (<i>Pseudomonas syringae</i> pv. <i>syringae</i>) |
| <input type="checkbox"/> Wheat Streak Mosaic Virus (WSMV) | <input type="checkbox"/> Other (SPECIFY) |
| Other (SPECIFY) | <input type="checkbox"/> Other (SPECIFY) |
| Other (SPECIFY) | <input type="checkbox"/> Other (SPECIFY) |
| <input type="checkbox"/> Other (SPECIFY) | <input type="checkbox"/> Other (SPECIFY) |

15. INSECT: (0=Not Tested; 1=Susceptible; 2=Resistant; 3=Intermediate; 4=Tolerant)

PLEASE SPECIFY BIOTYPE (where needed)

- | | |
|--|--|
| <input type="checkbox"/> 0 Hessian Fly (<i>Mayetiola destructor</i>) | <input type="checkbox"/> Other (SPECIFY) |
| <input type="checkbox"/> 0 Stem Sawfly (<i>Cephus</i> spp.) | <input type="checkbox"/> Other (SPECIFY) |
| <input type="checkbox"/> 0 Cereal Leaf Beetle (<i>Oulema melanopa</i>) | <input type="checkbox"/> Other (SPECIFY) |
| <input type="checkbox"/> 0 Russian Aphid (<i>Diuraphis noxia</i>) | <input type="checkbox"/> Other (SPECIFY) |
| <input type="checkbox"/> 0 Greenbug (<i>Schizaphis graminum</i>) | <input type="checkbox"/> Other (SPECIFY) |
| <input type="checkbox"/> 0 Aphids | <input type="checkbox"/> Other (SPECIFY) |

16. ADDITIONAL INFORMATION ON ANY ITEM ABOVE, OR GENERAL COMMENTS

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EXHIBIT D
Briggs (SD3367)
Additional Descriptive Information

Release of 'Briggs' Hard Red Spring Wheat
(Revised 5/10/2003)

Briggs was developed by the South Dakota Agricultural Experiment Station and tested under the experimental designation of SD3367. It is an early, semidwarf, hard red spring wheat from the cross BW114/BERGEN//SD3097. It has been in South Dakota yield trials since 1997, in regional yield trials from 2000-2001, in CPT trials from 1999-2001, and in the Wheat Quality Council trial in 2000. It is anticipated that Briggs will be submitted for cultivar protection under the United States Plant Variety Protection Act with the certification option.

The major strengths of 'Briggs' include:

- Resistant to Leaf and Stem rust, consistent over years and locations
- Higher protein
- Higher and stable yield
- Intermediate to Scab

In South Dakota yield trials SD3367 has averaged 2 bushels per acre more than 'Russ' and 'Oxen'. It appears to be widely adapted and has performed well across South Dakota and the region. However, yield advantage is discernible, particularly, under heavy leaf rust pressure. In Groton location, where leaf rust was heavy during 2001, it has yielded almost 4 bushels higher than 'Oxen' and 8 bushels higher than 'Russ'. It is a tall semidwarf, on the average two inches taller than Oxen, four inches shorter than Russ, and about the same as Walworth, Forge, and Ember. Time from planting to heading has been 1 day earlier than Oxen, two days earlier than Russ, and about the same as Butte 86.

SD3367 is resistant to the prevalent races of stem and leaf rust. SD3367 generally gets less leaf rust than Oxen. SD3367 is moderately resistant to leaf spotting diseases. Its resistance to scab is intermediate, similar to Ingot, but less resistant than Alsen.

The protein content of SD3367 is 0.5 percentage points above Russ and Oxen, similar to Ingot. The dough from SD3367 has strong mixing and good baking properties similar to that from Russ and Oxen.

EXHIBIT D
Briggs (SD3367)
Additional Descriptive Information

Wheat Quality Council Observational Data for 'Briggs' Hard Red Spring Wheat

Table 3. Kernel quality characteristics of SD3367 in comparison to four other hard red spring wheat lines evaluated in 2000 Wheat Quality Council trials grown at Brookings, SD and Casselton, ND.

Table 4. Flour and bake quality characteristics of SD3367 in comparison to four other hard red spring wheat lines evaluated in 2000 Wheat Quality Council trials grown at Brookings, SD and Casselton, ND.

Additional Information. Email correspondence pertaining to use of the name "Briggs" for SD3367.

Table 3. Average kernel quality characteristics of five hard red spring wheat lines evaluated in 2000 Wheat Quality Council trials grown at Brookings, SD and Casselton, ND.

Entry	TW (lb/bu)	Large Kernel (%)	Hardness Index	Kernel Moisture (%)	Kernel Size (mm)	1000			Wheat Ash (%)	Falling Number (sec)	NIR Hardness	Vitreous Kernel (%)
						Kernel Weight (mg)	Wheat Moisture (%)	Wheat Protein (%)				
BR3677	59.70	57.5	64.45	11.45	2.41	30.4	9.55	14.5	1.79	412.0	72.3	90.3
COI955W	61.25	57.5	67.85	11.05	2.43	30.7	9.45	13.0	1.64	349.5	68.3	8.0
GRANDIN	61.65	76.0	73.50	11.20	2.56	30.9	9.95	14.2	1.71	384.5	89.6	82.5
SD3348	62.35	70.0	67.60	11.80	2.45	30.8	9.65	14.4	1.64	393.5	84.8	84.2
SD3367	63.15	86.0	62.85	10.65	2.71	34.0	9.55	14.8	1.67	411.5	93.5	87.3
SE	0.35	8.1	2.82	0.39	0.11	2.2	0.20	0.6	0.08	35.7	4.3	3.8

Table 4. Average flour and bake quality characteristics of five hard red spring wheat lines evaluated in 2000 Wheat Quality Council trials grown at Brookings, SD and Casselton, ND.

Entry	Flour		Flour Moisture (%)	Flour Protein (%)	Flour Ash (%)	Water Absorbance (%)	Arrival Time (mm)	Peak Time (min)	Stability (min)	Breakdown (min)	Bake Absorption (min)	Loaf Volume (cc)	Crumb	Crumb	Crumb Texture	Bake Rating
	Color	Grain														
BR3677	13.2	14.0	0.57	59.9	3.6	9.0	15.2	19	62.1	2750	5.2	4.6	4.8	4.3		
COI955W	13.0	12.3	0.55	57.8	2.2	6.5	13.7	14.4	59.9	2621	5.2	5.0	5	3.6		
GRANDIN	13.4	13.5	0.56	60.1	2.7	6.4	10.4	12.4	62.9	2775	3.8	3.8	4.6	4.0		
SD3348	13.0	13.4	0.48	58.3	2.5	8.0	14.4	15.0	60.2	2588	4.2	4.8	4.4	3.4		
SD3367	12.9	13.9	0.53	62.6	3.4	5.6	7.9	12.4	62.9	2695	3.8	3.2	4.8	3.6		
SE	0.3	0.6	0.01	0.5	0.4	0.7	1.2	1.1	2.2	105	0.5	0.6	0.6	0.4		

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). The information is held confidential until the certificate is issued (7 U.S.C. 2426).

EXHIBIT E
STATEMENT OF THE BASIS OF OWNERSHIP

1. NAME OF APPLICANT(S) South Dakota Agricultural Experiment Station	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER SD3367	3. VARIETY NAME Briggs
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP, and Country) South Dakota State University Ag Hall 129 Brookings SD 57007	5. TELEPHONE (include area code) 606-688-4149	6. FAX (include area code) 605-688-6065
7. PVPO NUMBER 200300142		

8. Does the applicant own all rights to the variety? Mark an "X" in the appropriate block. If no, please explain ☒ YES ☐9. Is the applicant (individual or company) a U.S. National or a U.S. based company? If no, give name of country ☒ YES ☐ NO10. Is the applicant the original owner? ☒ YES ☐ NO If no, please answer one of the following:

a. If the original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. National(s)?

☐ YES ☐ NO If no, give name of country

b. If the original rights to variety were owned by a company(ies), is (are) the original owner(s) a U.S. based company?

☐ YES ☐ NO If no, give name of country

11. Additional explanation on ownership (If needed, use the reverse for extra space):

PLEASE NOTE:

Plant variety protection can only be afforded to the owners (not licensees) who meet the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.
2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.
3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed the final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definitions.

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 6 minutes per response, including the time for reviewing the instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

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